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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,190	08/23/2006	Johann Wiesmüller	0091-0004	9506
26568	7590	06/25/2009	EXAMINER	
COOK ALEX LTD SUITE 2850 200 WEST ADAMS STREET CHICAGO, IL 60606			GWARTNEY, ELIZABETH A	
			ART UNIT	PAPER NUMBER
			1794	
			MAIL DATE	DELIVERY MODE
			06/25/2009	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/567,190

**Applicant(s)**

WIESMULLER, JOHANN

**Examiner**

Elizabeth Gwartney

**Art Unit**

1794

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 April 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 23-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 23-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SE/US)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. The Amendment filed 04/13/2009 has been entered. Claims 12-22 have been cancelled and claims 23-33 have been added. Claims 23-33 are pending.
2. The previous claim objections, 112 2<sup>nd</sup> Paragraph rejections have been withdrawn in light of applicant's amendments made 04/13/2009.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 23-33 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 23 recites "the product of step (a) is added to a drink, optionally admixed with a raw material for drinks, said drink being present at a temperature of at least 40°C." While there is support in the specification for mixing loaded silica gel with black tea powder and pouring boiling water over the mixture, there is no explicit support for "said drink being present at a temperature of at least 40°C."

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 23-24 and 25-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lou et al. (US 6,235,274) as evidenced by EVONIK Industries "Product Information - SIPERNAT® D17").

Regarding claims 23-24, 26-27 and 31, Lou et al. disclose a process for imparting aroma over relatively long periods of time in a controllably releasable manner to beverages (Abstract, C3/L65-C4/L3) comprising the steps of: (a) providing silica powder loaded with a flavoring agent (Abstract, *see* SIPERNAT® D17- C8/L22-24/Example II, C3/L29-25); and (b) adding the flavor adsorbed microparticles to a beverage (C3/L65-C4/L3).

Given that Lou et al. disclose that the flavor component is adsorbed onto the silica by means of conveyance, including using a fluidized bed plating apparatus (C4/L12-16), it is clear that the conveyance would inherently involve introducing the carrier particles into liquid flavoring agents.

Given that Lou et al. disclose a silica powder, SIPERNAT<sup>®</sup> D17, it is clear that the silica powder would inherently have a specific surface area between 0.1 and 1000 m<sup>2</sup>/g or 50 to 500 m<sup>2</sup>/g (*see* 100 m<sup>2</sup>/g- as evidenced by EVONIK Industries at C2), a particle size of greater than or equal to 10 μm (see 10 μm - as evidenced by EVONIK Industries, C1/Particle size (d50), C2), and a pore size between 0.3 and 5000 nm.

Regarding the type and temperature of drink, given that Lou et al. adding flavored silica particles to beverages (C3/L65-C4/L3), it would have been obvious to one of ordinary skill in the art at the time of the invention to have added the flavored silica particles to any beverage including aqueous infusion or extraction drinks, such as coffee or tea that are a temperature of at least 40°C, and arrive at the current invention.

Regarding claim 28, Lou et al. disclose all of the claim limitations as set forth above. Given that Lou et al. disclose an olfactory sense effecting composition (C5/L53-54), it is clear that the composition would inherently be readily volatile.

8. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lou et al. (US 6,235,274) as evidenced by EVONIK Industries ("Product Information - SIPERNAT<sup>®</sup> D17") as applied to claim 23 above, and further in view of Wason ("Silica Gels").

Regarding claim 13, Lou et al. disclose all of the claim limitations as set forth above but the reference fails to disclose that the silicates are silica gels.

Wason teach that silica gels, like other synthetic silicas are amorphous products (p. 175/C1/P1). Wason teaches that the controlled pore structure, pore volume and surface area of silica gels offer better performance than the precipitated silicas as adsorbents (p.180/C2/P1).

Further, Wason teaches that silica gels have a surface area between 250 and 900 m<sup>2</sup>/g (p.178/Table 1), an average pore diameter ranging from 14-1000 angstroms (i.e. 1.4 - 100 nm – p.178/Table 1) and an average particle size ranging from 2 to 15 μm (p.179/Table 3).

Lou et al. and Wason are combinable because they are concerned with the same field of endeavor, namely, silica compositions. It would have been obvious to one of ordinary skill in the art at the time of the invention to have replaced the silica powder (i.e. silica precipitate) of Lou et al. with a silica gel, as taught by Wason, because silica gels perform better than silica precipitates as adsorbents.

9. Claims 29-30 and 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lou et al. (US 6,235,274) as evidenced by EVONIK Industries (“Product Information - SIPERNAT® D17”) as applied to claim 23 above, and further in view of Milleville (US 2,513,813).

Regarding claim 29-30 and 32-33, Lou et al. disclose all of the claim limitations as set forth above. While Lou et al. disclose the use of flavor components, the reference does not explicitly disclose that said flavoring agents are of natural origin and selected from the group consisting of essential oils, citrus oils, fruit essences and aroma extracts. Nor does Lou et al. disclose that the liquid containing the flavoring agents is process water from the flavor industry or a flavor concentrate.

Milleville teaches a method for recovering volatile flavors from solutions containing the volatile components (C6/L33-36). Milleville teach that the recovered volatiles are in the form of

concentrated essences or volatile concentrates and are derived from fruits, tea, coffee, and plant products (C1/L1-5).

Lou et al. and Milleville are combinable because they are concerned with the same field of endeavor, namely, volatile flavoring components. Given Lou et al. disclose the use of a flavoring component broadly (C3/L29-30), since Milleville teaches that it was well known to concentrate volatiles from solutions including tea, coffee, fruits, and plants, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used any flavoring component on the loaded silica particulates of Lou et al., including aroma extracts of natural origin (i.e. plants, fruits, coffee, tea) in the form of concentrates, and arrive at the current invention.

### ***Response to Arguments***

10. Applicant's arguments filed 04/13/2009 have been fully considered but they are not persuasive.

Applicants argue that Lou et al. does not disclose “adding a flavor component-bearing silica powder composition” resulting the adsorption of an olfactory active material onto silica to a beverage. Instead, Applicants explain that Lou et al. discloses microparticles prepared in a three step process including (a) adsorption of a flavoring component onto silica;(b) blending/extrusion ; and (c) at least one particularization step. Applicants find that a person skilled in the art aiming to provide a long lasting release of the flavor substance would not consider omitting steps (b) and (c) from the process of Lou et al. and would not consider adding the product of step (a) of the Lou et al. process to a beverage.

However, there is no language in newly presented claim 23 to limit the process of making flavor loaded silica particles to an adsorption step only.

### ***Conclusion***

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth Gwartney whose telephone number is (571) 270-3874. The examiner can normally be reached on Monday - Friday; 7:30AM - 3:30PM EST..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks can be reached on (571) 272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/E. G./  
Examiner, Art Unit 1794

/KEITH D. HENDRICKS/  
Supervisory Patent Examiner, Art Unit 1794